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To provide an SPR sensor plate which allows easy fixation of an antibody and easy retention of a subject and which can be manufactured easily, as well as an immune reaction measuring instrument employing this SPR sensor plate. The SPR sensor plate includes: a plate-shaped light waveguide 3 that allows light from a light source 21 to be transmitted therethrough; and a sensing metal film 5 formed on part of a surface of the light waveguide 3. A reflecting metal film 7 is formed on opposite end surfaces of the light waveguide 3 except for a light incident surface 9 and a light exit surface 11 forming inclined surfaces having a same inclination.